

Fujitsu recommends Windows 8.

# Data Sheet

## Fujitsu ESPRIMO PH320 E85+ Desktop PC

Your Immediately Deliverable Multimedia PC

The FUJITSU ESPRIMO PH320 E85+ is equipped with the latest Intel® technology including Hyper-Threading and Turbo Boost functionality. This solid performer provides a timeless design fitting perfectly into your home environment. The FUJITSU ESPRIMO PH320 E85+ is available from your dealer at all times and is thus an ideal choice for quick purchase decisions.

### High performance

The ideal PC for the everyday needs of small offices

- 4th generation Intel® Core™ i3, Core™ i5, and Core™ i7 processors

### Designed and engineered in Germany

High quality and stable functionality with low failure rates

- The development, production and function tests are all under one roof in Germany

### Rich multimedia experience

Enjoy rich high-definition multimedia content

- Optionally available with the powerful AMD Radeon™ R9 255 graphics card (2 GB of dedicated video memory) for demanding applications



# Components

<b>Processor</b>	Intel® Core™ i7-4790 processor (4 Cores / 8 Threads, 3.60 GHz, up to 4.0 GHz, 8 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i7-4770 processor (4 Cores / 8 Threads, 3.40 GHz, up to 3.9 GHz, 8 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i5-4690 processor (4 Cores / 4 Threads, 3.50 GHz, up to 3.9 GHz, 6 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i5-4670 processor (4 Cores / 4 Threads, 3.40 GHz, up to 3.8 GHz, 6 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i5-4590 processor (4 Cores / 4 Threads, 3.30 GHz, up to 3.7 GHz, 6 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i5-4570 processor (4 Cores / 4 Threads, 3.20 GHz, up to 3.6 GHz, 6 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i3-4150 processor (2 Cores / 4 Threads, 3.50 GHz, 3 MB, Intel® HD Graphics 4400)
	Intel® Core™ i3-4130 processor (2 Cores / 4 Threads, 3.40 GHz, 3 MB, Intel® HD Graphics 4400)
	Intel® Pentium® processor G3440 (2 Cores / 2 Threads, 3.30 GHz, 3 MB, Intel® HD Graphics)
	Intel® Pentium® processor G3420 (2 Cores / 2 Threads, 3.20 GHz, 3 MB, Intel® HD Graphics)
	Intel® Pentium® processor G3240 (2 Cores / 2 Threads, 3.10 GHz, 3 MB, Intel® HD Graphics)
	Intel® Pentium® processor G3220 (2 Cores / 2 Threads, 3.00 GHz, 3 MB, Intel® HD Graphics)
	*with Intel® Turbo Boost Technology (clock speed and performance will vary depending on workload and other variables)
<b>Operating systems</b>	
<b>Operating system</b>	Windows 8.1
<b>Operating system compatible</b>	openSUSE Linux
<b>Memory modules</b>	2 GB (1 module(s) 2 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM
	4 GB (1 module(s) 4 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM
	8 GB (1 module(s) 8 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM
<b>Hard disk notes</b>	Up to 20 GB of HDD space is reserved for system recovery
	SSHD (Solid State Hard Disk, Hybrid drive)
	SSD (Solid State Disk)
	SED (Self-Encrypting Drive)
<b>Hard disk drives (internal)</b>	SSD SATA III, 256 GB, 2.5-inch
	SSD SATA III, 128 GB, 2.5-inch, SED
	SSD SATA III, 128 GB, 2.5-inch
	HDD SATA III, 7,200 rpm, 2,000 GB, 3.5-inch
	HDD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch
	HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch
	HDD SATA II, 5,400 rpm, 320 GB, 2.5-inch
<b>Graphics</b>	NVIDIA® GeForce® GT630 DisplayPort 2GB FH, 2 GB
	NVIDIA® GeForce® 605 DisplayPort 1GB FH, 1 GB
	DP to DVI-D (single link) Adapter Cable
	ATI Radeon® HD7350 1GB FH, 1 GB
	AMD® Radeon R9 255 FH, 2 GB
<b>Drives (optional)</b>	BD Triple Writer SATA slim (tray)
	DVD-ROM
	DVD Super Multi
	MultiCard Reader 24in1 USB 2.0 3.5"

**Interface add on cards/components  
(optional)**

WLAN 802.11 abgn (2x2), (dedicated regions only, not for Indonesia)  
 USB 3.0 PCIe x1  
 Gigabit Ethernet PCIe x1, DS  
 Dual serial card PCIe x1, powered  
 Dual serial card PCIe x1

## Base unit

Base unit	ESPRIMO PH320 E85+
<b>Mainboard</b>	
Mainboard type	D3230
Formfactor	µATX
Chipset	Intel® H81
Processor socket	LGA 1150
Processor quantity maximum	1
Memory slots	2 DIMM (DDR3)
Supported capacity RAM (max.)	16 GB
Memory frequency	1,600 MHz
Memory notes	Dual channel support. For dual channel performance, identical memory modules in each channel are necessary (minimum 2 modules).
LAN	10/100/1,000 MBit/s Realtek RTL8111G
BIOS version	AMI Aptio 4.6
BIOS features	BIOS Flash EPROM update by software Recovery BIOS Unified Extensible Firmware Interface (UEFI)
Audio codec	Realtek ALC671
Audio features	High Definition Audio, 5.1 surround sound
<b>I/O controller on board</b>	
Serial ATA total	3
thereof SATA III	2
Controller functions	Serial ATA II (3 Gbit) Serial ATA III (6 Gbit) NCQ AHCI
<b>Interfaces</b>	
Audio: line-in	1
Audio: line-in / microphone	1
Audio: line-out	1
Front audio: microphone	1
Front audio: headphone	1
USB 2.0 total	6
USB 3.0 total	2
USB front	2x 2.0
USB rear	2x 2.0/ 2x 3.0
USB internal	2x 2.0
VGA	1
DVI	1 (DVI-D)
Mouse / Keyboard (PS/2)	1/1

**Interfaces**

Ethernet (RJ-45)	1
------------------	---

**Input device / components**

Input devices (optional)	Optical USB wheel mouse
	Optical USB/PS2 tilt wheel mouse
	KBPC PX ECO
	Mouse M440 ECO

**Drive bays**

Drive bays total	5
3.5-inch internal bays	2
3.5-inch external bays	1
5.25-inch external bays	2

**Slots**

PCI-Express 3.0 x16	1 x (210 mm / 8.27 inch) Full height
PCI-Express x1	2 x (190 mm / 7.48 inch) Full height

**Graphics on board**

Graphics brand name	Intel® HD Graphics, HD Graphics 4400, HD Graphics 4600 (depending on processor)
Shared video memory	up to 1,782 MB
TFT resolution (VGA)	1,024 x 768 pixel 1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,600 x 1,200 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel
TFT resolution (DVI)	1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel 1,920 x 1,200 pixel
Graphics features	Dual display support DirectX® 11.1 HDCP support Open CL® 1.2 OpenGL® 4.0
Graphics notes	up to 1 GB dedicated video memory (main memory owned and locked for graphics use) Tested resolutions, depending on display type additional resolutions and frequencies possible Shared memory depending on main memory size and operating system Resolution (color depth up to 32 Bit/pixel) For TFT we recommend using 60Hz

**Electrical values**

Power efficiency note	power supply efficiency (at 230V; 20% / 50% / 100% load) : 83% / 86% / 85%
Rated voltage range	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Operating voltage range	90 V - 264 V
Operating line frequency range	47 Hz - 63 Hz
Max. output of single power supply	280 W
Power factor correction/active power	active
Monitor outlet	No

**Power consumption**

Power consumption note	See white paper Energy Consumption 0-Watt mode with hard-off switch
------------------------	--

**Heat dissipation**

Heat dissipation notes	See white paper Energy Consumption
------------------------	------------------------------------

**Noise emission**

Related Processors for noise	Intel® Core™ i7 4770
Standard noise emission	2x2 GB, HDD, ODD, Windows According to ISO 7779:2010, ECMA-74
Standard noise notes / description	A-weighted sound power level LwAd (in B) / Workplace related A-weighted sound pressure level LpAm (in dB(A)) Bystander position
Standard noise operation mode: CPU 50% load	3.4 B / 21dB(A) Bystander; 25 dB(A) Operator position
Standard noise operation mode: HDD load	3.4 B / 21dB(A) Bystander; 26 dB(A) Operator position
Standard noise operation mode: Idle mode	3.4 B / 20dB(A) Bystander; 26 dB(A) Operator position
Standard noise operation mode: ODD load	4.6B / 32dB(A) Bystander ; 38 dB(A) Operator position
Standard noise operation mode: Office applications 2.0	3.4 B / 20dB(A) Bystander; 26 dB(A) Operator position

**Dimensions / Weight / Environmental**

Dimensions (W x D x H)	175 x 425 x 353 mm 6.89 x 16.74 x 13.9 inch
Operating position	Vertical
Weight	9 kg
Weight (lbs)	20.22 lbs
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	10 - 35 °C (50 - 95 °F)
Operating relative humidity	5 - 85 % (relative humidity)

**Compliance**

Product	ESPRIMO PH320
Model	MI4W
Germany	TÜV GS
Europe	CE
Global	RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment) Microsoft Operating Systems (HCT / HCL entry / WHQL) ENERGY STAR® in progress EPEAT® in progress (dedicated regions)
Compliance link	<a href="http://globalsp.ts.fujitsu.com/sites/certificates">http://globalsp.ts.fujitsu.com/sites/certificates</a>

**Additional Software**

Additional software (preinstalled)	Workplace Protect (secure authentication solution) Adobe® Reader® (pdf reader) McAfee Multi Access Security (anti-virus and internet security software; 60 days trial version) Win8: Microsoft Push Button Recovery (hard disk based recovery) Microsoft Office (buy license to activate the pre-installed Microsoft Office)
Additional software (optional)	Recovery DVD for Windows® Drivers & Utilities DVD (DUDVD) CyberLink PowerDVD BD (playback software for Blu-ray Disc™) CyberLink PowerDVD DVD (playback software for DVD) Nero Essentials XL

**Manageability**

Manageability technology	DeskUpdate Driver management PXE 2.1 Boot code Wake up from S5 (off mode) WoL (Wake on LAN)
--------------------------	--

Supported standards	DMI PXE WMI
---------------------	-------------------

**Security**

Physical Security	Kensington Lock support Eye for padlock
-------------------	--

System and BIOS Security	Boot sector virus protection Write protect option for the Flash EPROM Control of external interfaces
--------------------------	--

User Security	User and supervisor BIOS password Hard disk password
---------------	---

**Miscellaneous****Packaging information**

Packaging dimension (mm)	500 x 290 x 540 mm
Packaging dimension (inch)	19.69 x 11.42 x 21.26 inch
Max. quantity / pallet	24
Material - Weight (g) Carton	1270 g
Material - Weight (lbs) Carton	2.8 lbs
Material - Weight (g) EPS / PS	160 g
Material - Weight (lbs) EPS / PS	0.35 lbs
Material - Weight (g) PE	60 g
Material - Weight (lbs) PE	0.13 lbs
Packaging notes	printed user documentation is bleached in chlorine free process

**Warranty**

Standard Warranty	1 year / 2 years (depending on country)
-------------------	---

Service level	Bring-In / Onsite Service (for countries within region FTS CEMEA&I, for all other countries depending on local regulations, minimum: 1 year material warranty)
---------------	--

Warranty Terms & Conditions	<a href="http://support.ts.fujitsu.com/warranty">http://support.ts.fujitsu.com/warranty</a>
-----------------------------	---

**Maintenance and Support Services - the perfect extension**

Recommended Service	9x5, Response Time: Next Business Day
---------------------	---------------------------------------

Spare Parts availability	3 years after end of product life
--------------------------	-----------------------------------

Service Weblink	<a href="http://www.fujitsu.com/fts/services/support">http://www.fujitsu.com/fts/services/support</a>
-----------------	---

## Recommended Accessories

**Mouse M440 ECO**

Fujitsu Mouse M440 ECO is made from 100% bio material and has a completely PVC free cable. The elegant M440 ECO works on nearly every surface and follows all your hand movements smoothly and precisely. It features two main buttons and as well as a scroll wheel providing comfortable computing to both right and left-handed users.

Order Code:  
S26381-K450-L200

**SOUNDSYSTEM DS E2000 Air**

The new more powerful SOUNDSYSTEM DS E2000 Air gives you impressive, well-balanced sound throughout the frequency band. It is an unbeatable USB speaker set with a surprisingly small form factor. The robust satellite speakers are decorated with a deluxe piano finish and the base is adorned with warm ambient lighting.

Order Code:  
S26391-F7128-L600

HS E2000 Communicator Headset



The Fujitsu HS E2000 Communicator headset allows you to use your personal computer for Voice over IP (VoIP) in stereo audio quality. This premium headset is designed to provide superb audio quality and comfort for the telephony, internet chat, speech recognition, video conferencing and multimedia applications.

Order Code:  
S26391-F7139-L5

Keyboard KBPC PX ECO



Fujitsu's KBPC PX ECO keyboard is the perfect contribution to Green IT. The keyboard is made out of 45% renewable raw material and comes with a PVC free USB cable. In addition, the KBPC PX ECO offers first class comfort and ergonomics. It attracts attention with its impressive modern design and useful extras.

S26381-K341-L1\*\* (\*\*:  
country specific variation)

Keyboard KB900



The KB900 is a very flat keyboard with extra low keys and spill-resistant protection. The elegant design and top-quality construction makes the KB900 the ideal input device for any PC or Notebook user. If you accidentally spill some water or coffee onto the keyboard, this special construction helps the liquid to flow away.

S26381-K560-L4\*\* (\*\*:  
Country specific variation)

# More information

## Fujitsu OPTIMIZATION Services

In addition to Fujitsu ESPRIMO PH320 E85+, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

### Fujitsu Portfolio

Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

### Computing Products

[www.fujitsu.com/global/services/computing/](http://www.fujitsu.com/global/services/computing/)

### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

## More information

Learn more about Fujitsu ESPRIMO PH320 E85+, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.  
[www.fujitsu.com/fts/ESPRIMO](http://www.fujitsu.com/fts/ESPRIMO)

## Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT. Please find further information at <http://www.fujitsu.com/global/about/environment>



## Copyrights

All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

For further information see [www.fujitsu.com/terms](http://www.fujitsu.com/terms)

Copyright © Fujitsu Technology Solutions

## Disclaimer

Technical data are subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

## Contact

FUJITSU Technology Solutions  
Website: [www.fujitsu.com/fts](http://www.fujitsu.com/fts)  
2014-03-25 CE-EN

All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner. For further information see [www.fujitsu.com/terms](http://www.fujitsu.com/terms)  
Copyright © Fujitsu Technology Solutions